



west virginia department of environmental protection

Division of Air Quality
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Earl Ray Tomblin, Governor
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Final Determination

Application Number: R13-3239
Facility ID Number: 017-00149
Name of Applicant: Rover Pipeline LLC
Name of Facility: Sherwood Compressor Station
Location of Facility: Near Smithburg, Doddridge County
Latitude/Longitude: 39.26689/-80.69403
Application Type: Construction
Submission Date: March 2, 2015
Complete Date: April 1, 2015
Public Notice Date: **May 5, 2015 (1) and (2) June 16, 2015**
Public Meeting Date: **July 7, 2015**
Engineer: Joe Kessler

Background Information

On May 5, 2015 and again on June 16, 2015, pursuant to §45-13-8, the West Virginia Division of Air Quality (DAQ) provided notice to the public of a preliminary determination to issue Permit Number R13-3239 to Rover Pipeline LLC (Rover) for the construction of the Sherwood Compressor Station proposed to be located approximately 2.66 miles southeast of Smithburg, Doddridge County, WV. The Draft Permit and Engineering Evaluation/Fact Sheet were made available to the public for review from the date of the first public advertisement. The permit application had previously been available for public review since the application was submitted.

The first public notice date was followed by a public comment period (required to be a minimum of 30 days under §45-13-8) that ended at 5:00 P.M. on June 4, 2015. However, as a result of the interest expressed in the permitting action and the Director's determination that a public

meeting was warranted, a second public notice was run that ended at 5:00 P.M. on July 16, 2015. This second advertisement included the date, time, and location of a public meeting that was held on July 7, 2015 in the Doddridge County Park Activities building. Both public advertisements were Class I Legal Advertisements that ran in *The Herald Record*, a newspaper of general circulation in Doddridge County (published in West Union).

During both public comment periods, the DAQ accepted comments on our preliminary determination to issue permit R13-3239 to Rover and on all documents related thereto. To provide information on the permitting action and to facilitate the submission of comments, the DAQ held, on July 7, 2015, and pursuant to §45-13-9, a public meeting concerning R13-3239. A “Response to Comments” document has been prepared which provides a response to all formal comments provided to the DAQ during the above mentioned comment periods and received at the public meeting. This document will be sent to all those who commented during the public notice period.

CHANGES TO DRAFT PERMIT & ENGINEERING EVALUATION/FACT SHEET

Since the preparation of the original draft permit and engineering evaluation/fact sheet, several changes have been made to the proposed final permit based on additional information provided by Rover and more extensively, on comments received by the public during the public notice period (including the public meeting).

Emergency Generator Change

On August 20, 2015, Rover submitted information requesting that the originally permitted emergency generator be changed to a slightly larger model. The requested change was from a 957 hp Caterpillar C15 ACERT 500 kW_e unit to a 1,005 hp Caterpillar C27 ACERT 750 kW_e unit. Potential emissions from the new C27 were, as with the original unit, based on information provided by the vendor and on factors obtained from AP-42, Section 3.4. Diesel with a maximum sulfur content of 0.5% was used in the calculation of SO₂. Hourly emissions based on the rated horsepower of the unit and increased by a safety factor of 10%. Annual emissions were based on 500 hours per year of operation.

Table 1: New Emergency Generator PTE

Pollutant	Emission Factor	Source	Hourly (lb/hr)	Annual (ton/yr)
CO	0.25 g/bhp-hr	Vendor	0.61	0.14
NO _x	5.25 g/bhp-hr	Vendor	12.80	2.91
PM _{2.5} /PM ₁₀ /PM ⁽¹⁾	0.021 g/bhp-hr	Vendor	0.05	0.01
SO ₂	0.0004 lb/bhp-hr	AP-42, Table 3.4-1	0.44	0.10
VOCs ⁽¹⁾	0.03 g/bhp-hr	Vendor	0.07	0.02
Total HAPs	Various	AP-42, Table 3.4-3, 4	0.01	0.002

(1) Includes condensables.

This change will result in the following changes in facility-wide potential-to-emit (PTE) at the Sherwood Compressor Station (revised facility-wide PTE included as Attachment A):

Table 1: Change In Facility-Wide Annual PTE

Pollutant	C15 ⁽¹⁾	C27	Change
	tons/year	tons/year	tons/year
CO	0.21	0.14	-0.07
NO _x	3.03	2.91	-0.12
PM _{2.5} /PM ₁₀ /PM	0.01	0.01	0.00
SO ₂	0.10	0.10	0.00
VOCs	0.01	0.02	0.01
HAPs	< 0.01	< 0.01	0.00

(1) Emissions taken from R13-3229 Fact Sheet.

The new engine will not substantively change the 40 CFR 60, Subpart III applicability discussion as given in the engineering evaluation/fact sheet. Rover has provided information showing this engine is certified as in compliance with the Tier 2 emission standards under §80.112.

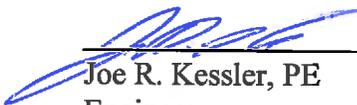
Received Comments

Based on the comments received and discussed in the “Response to Comments” document, permit R13-3239 has been revised in the following way:

- The permit now includes Section 12 with requirements related to the release of fugitive emissions. This section will require:
 - (1) The limitation, monitoring, and recording of compressor blowdowns, engine startup vents, and pigging events at the facility [12.1.1., 12.1.2., and 12.2.1];
 - (2) The monitoring, recording, and reporting to the DAQ of all other events where a substantive amount of gas is released to better provide information to the DAQ on the frequency and duration of unforeseeable uncontrolled natural gas releases [12.2.2. and 12.3.1.];
 - (3) Development of a plan to limit the duration of any unforeseen release of natural gas by responding to the event (not including the known events listed under 12.1.1.) in a reasonable time frame [12.1.3.];
 - (4) Placement of visible contact information at the facility [12.1.3.]; and
 - (5) A limitation on the number of fugitive components located at the facility to the amount used to calculate the fugitive leak emissions or, if as-built component counts are greater than the estimated amounts, require the permit to be modified.
- A prohibition on unreasonable noise and light was added to the permit under 3.1.7.

RECOMMENDATION TO DIRECTOR

Pursuant to §45-13-8.8, all submitted relevant comments received during the R13-3239 public comment period have been reviewed and are appropriately addressed in the "Response to Comments" document. It is the view of the DAQ that, after consideration of all comments received and revisions to the draft permit as noted above, the available information indicates Rover Pipeline LLC's proposed construction of a compressor station will meet the emission limitations and conditions set forth in the permit and should comply with all currently applicable state and federal air quality management rules and standards. Therefore, I recommend to the Director the issuance of a Permit Number R13-3239 to Rover Pipeline LLC for the proposed construction of the Sherwood Compressor Station located near Smithburg, Doddridge County, WV.



Joe R. Kessler, PE
Engineer



Date

Attachment A: Facility-Wide PTE

Rover Pipeline LLC: Sherwood Compressor Station
Permit Number R13-3239: Facility ID 017-00149

Emission Unit	EP ID	CO		NO _x		PM ⁽¹⁾		SO _x		VOC		Formaldehyde		Total HAPs	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Compressor Engine	CE-1E	2.21	8.80	5.74	22.86	0.39	1.55	0.02	0.09	4.33	17.24	0.71	2.83	1.06	4.24
Compressor Engine	CE-2E	2.21	8.80	5.74	22.86	0.39	1.55	0.02	0.09	4.33	17.24	0.71	2.83	1.06	4.24
Compressor Engine	CE-3E	2.21	8.80	5.74	22.86	0.39	1.55	0.02	0.09	4.33	17.24	0.71	2.83	1.06	4.24
Emergency Generator	GE-1	0.61	0.01	12.80	2.91	0.05	0.01	0.44	0.10	0.07	0.02	~0.00	~0.00	<0.01	<0.01
Infrared Line Heater	HTR-1	0.04	0.19	0.05	0.22	<0.01	0.02	~0.00	~0.00	<0.01	0.01	~0.00	~0.00	~0.00	~0.00
Storage Tanks	TK-1 to TK-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.04	0.00	0.00	0.00	0.00
Truck Loading	LOAD-1, -2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	<0.01	0.00	0.00	0.00	0.00
Fugitives	n/a	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.50 ⁽²⁾	1.88	0.00	0.00	1.37	0.02
Facility-Wide Total →		7.28	26.60	30.07	71.71	1.23	4.68	0.50	0.37	70.63	53.68	2.13	8.49	4.56	12.75
Facility-Wide PTE⁽³⁾ →		7.28	26.60	30.07	71.71	1.23	4.68	0.50	0.37	15.13	51.80	2.13	8.49	3.19	12.73

(1) All particulate matter emissions are assumed to be 2.5 microns or less.

(2) Short-term fugitive emissions are high as they are based on extremely rare scenario where there were one compressor start, 3 compressor blowdowns, and a pigging event in the same hour.

(3) PTE does not include fugitive emissions. No individual HAP has a PTE over 10 TPY (n-Hexane is the largest contributor). As the PTE of all individual HAPs are less than 10 TPY, the PTE of total HAPs is less than 25 TPY, and the PTE of each criteria pollutant is less than 100 TPY, the Sherwood Facility is defined as a minor (area) source for purposes of 40 CFR 61, 40CFR63, and Title V.